



UNITED STATES PATENT AND TRADEMARK OFFICE

44

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION N
10/072,858	02/05/2002	Densen Cao	5061.13 P	9311
7590	09/28/2004		EXAMINER	
Parsons, Behle & Latimer Suite 1800 201 South Main Street P.O. Box 45898 Salt Lake City, UT 84145-0898			LEWIS, RALPH A	
			ART UNIT	PAPER NUMBER
			3732	
DATE MAILED: 09/28/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/072,858	CAO, DENSEN	
	Examiner	Art Unit	7
	Ralph A. Lewis	3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-17 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 05 January 2002 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

Misnumbered Claims Renumbered

The originally filed claims included two different claims numbered "11". The second occurring claim 11 and the claims numbered 12-16 have been renumbered 12-17, respectively, and are hereinafter referred to in their new numbers. Applicant should make sure that the dependencies of the renumbered claims are correct.

Rejections based on 35 U.S.C. 112, second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 10, lines 1 and 2, there is no antecedent basis for "said LED chip module."

Rejections based on Obvious-type Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1- 17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over

claims 1-36 of U.S. Patent No. 6,331,111,
claims 1-20 of U.S. Patent No. 6,719,559,
claims 1-11 of U.S. Patent No. 6,755,648,
claims 1-20 of U.S. Patent No. 6,755,649,
claims 1-20 of U.S. Patent No. 6,780,010, and
claims 1-20 of U.S. Patent No. 6,783,362.

Merely providing for different versions of the same claimed subject matter by varying the order of the limitations and setting them forth in varying degrees of scope is a matter of claim construction and would have been obvious to one of ordinary skill in the art.

Claims 1-17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over

claims 1-24 of copending Application No. 10/016,992,
claims 25-33 of copending Application No. 10/017,454,
claims 1-5, 7-11, 13-22, 24 of copending Application No. 10/017,455,
claims 1-17 of copending Application No. 10/017,847,
claims 1-18 of copending Application No. 10/072,302,
claims 1-18 of copending Application No. 10/072,462,
claims 1-18 of copending Application No. 10/072,613,
claims 1-19 of copending Application No. 10/072,635,
claims 1-20 of copending Application No. 10/072,659,
claims 1-23 of copending Application No. 10/072,826,
claims 18-31 of copending Application No. 10/072,831,
claims 1-20 of copending Application No. 10/072,850,
claims 1-20 of copending Application No. 10/072,852,

claims 1-20 of copending Application No. 10/073,672,
claims 1-20 of copending Application No. 10/073,819,
claims 1-8, 10-20 of copending Application No. 10/073,822,
claims 1-19 of copending Application No. 10/073,823,
claims 1-20 of copending Application No. 10/188,449,
claims 1-60 of copending Application No. 10/188,520,
claims 1-27 of copending Application No. 10/189,224,
claims 1-37 of copending Application No. 10/189,233,
claims 1-35 of copending Application No. 10/189,255,
claims 1-20 of copending Application No. 10/189,307, and
claims 1-39 of copending Application No. 10/189,323.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the present application are obvious variations of those already set forth in the above applications. Merely providing for different versions of the same claimed subject matter by varying the order of the limitations and setting them forth in varying degrees of scope is a matter of claim construction and would have been obvious to one of ordinary skill in the art.

Rejections based on Prior Art

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 8-10 and 12-16 are rejected under 35 U.S.C. 102(a) as being anticipated by Mills (WO 99/16136).

Mills discloses a dental curing light (page 1, second paragraph) comprised of a hand held wand (Figure 5) having an elongated heat sink 45, 50, 51, having a distal end surface serving as a mounting platform on which primary heat sink 48 is mounted, covered light emitting semiconductors 43 mounted to the primary heat sink 48 and thermoelectric cooler 50.

In regard to claims 9 and 10, the light emitting semiconductor chips 43 of Mills et al would inherently have some incidental light that was emitted at an angle to the chip (see for example Sakai et al (4,698,730) Figure 1, 7; Doiron et al (5,698,866) Figure 10; as well as, applicant's own specification Figure 22a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills (WO 99/16136) in view of Doiron et al (5,698,866).

Mills discloses a dental curing light (page 1, second paragraph) comprised of a hand held wand (Figure 5) having an elongated heat sink 45, 50, 51, having a distal end surface serving as a mounting platform on which primary heat sink 48 is mounted, covered light emitting semiconductors 43 mounted to the primary heat sink 48 and thermoelectric cooler 50. Mills fails to disclose the claimed well on the primary heat

sink. In Mills the LEDs are mounted directly on a flat heat sink 48. Doiron et al, however, teach that an improvement over mounting diodes on a flat surface (Figures 9 and 10) is mounting them in a well (Figures 11 and 12) formed on the heat sink so that more light from the LEDs is reflected forward in the desired direction. To have mounted the Mills LEDs in wells as taught by Doiron et al so that more light is reflected forward in the desired direction would have been obvious to one of ordinary skill in the art.

Claims 11 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills (WO 99/16136).

Mills does not disclose the explicitly claimed insulators, controls on the wand housing, and vent. Such "nuts and bolts" would have been obvious to one of ordinary skill in the art in the construction of the Mills device. More particularly, the use of conventional insulators between the hot light components and the handle would have been obvious to prevent the handle from getting too hot, the placement of controls (e.g. on/off switch) on the wand housing so that the light can be controlled would have been conventional and obvious to the ordinarily skilled artisan and the use of a vent so that the Mills fan 49 can function properly would have been well within the domain of the ordinarily skilled artisan.

Allowable Subject Matter

Claims 2 and 3 are objected to and would be allowed if rewritten in independent form to include all of the limitations of the claims from which they depend and the filing

of a terminal disclaimer to overcome the obvious-type double patenting rejections above.

In distinction from claims 9, 10 and 17, the present claims 2 and 3 refer to the light that is emitted from the "chip module" which is defined as including the claimed "well". Any incidental light emitted from the chip itself is reflected straight forward by the walls of the well which is positively claimed as part of the "chip module". In Mills, if modified to include a well as in the obvious rejection above, the light emitted from the "chip module" would be emitted straight forward and the angular limitation would not be met.

Additionally, the "light emitted by said LED chip module is emitted at an angle . . . to said elongates heat sink longitudinal axis" limitation is interpreted as referring to the light that is directly emitted from the chip module, and not including within its scope the light as it might be subsequently changed in direction by other components. For example, Mills discloses a light guide 47 that subsequently changes the direction of the light that was originally emitted from the LEDs 43.

Prior Art

Applicant's information disclosure statements of January 05, 2002 and August 06, 2002 have been considered initialed copies enclosed herewith.

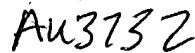
Adam et al (6,419,483 B1), Boutoussov et al (US 6,439,888 B1), Melikechi et al ((US 6,511,317), Hooker et al (US 6,554,463), Fregoso (US 6,611,110 B1), Logan et al (US 6,692,251) and Bianchetti et al (EP 1 090 607 A1) are made of record.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)..

Any inquiry concerning this communication should be directed to **Ralph Lewis** at telephone number **(703) 308-0770**. Fax (703) 872-9302. The examiner works a compressed work schedule and is unavailable every other Friday. The examiner's supervisor, Kevin Shaver, can be reached at (703) 308-2582.

R.Lewis
September 24, 2004


Ralph A. Lewis
Primary Examiner

AU3732